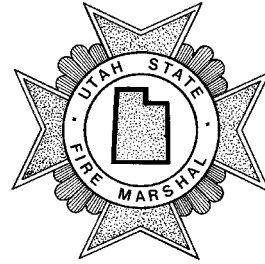


# *Smoke Detectors*

## *In The Home:*

### *A Matter Of Life & Death*



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Statistics show us that fires which occur in residential occupancies account for approximately 71% of all structure fires and are responsible for approximately 78% of all fire deaths. During 1992, which proved to be one of the worst years for fire related deaths in Utah, 32 people died as a result of fire. Of those 32 individuals, 22 were killed in home residential fires. Eight of those deaths were children under the age of five years. Further analysis of the 1992 data showed that not one of those home structure fires had any kind of smoke detection installed. For this reason, the Utah State Fire Marshal's Office would like to share some information relevant to the importance of installing and maintaining smoke detectors in your home.

Smoke detectors are self-contained fire alarm devices that consist of electrical components that include a smoke sensing chamber, an alarm sounding appliance, and are either battery operated or are connected to a separate power supply source. There are two types of smoke detectors - either ionization or photoelectric. Some detectors combine both types of sensors within the same unit. Tests have shown that ionization detectors respond slightly faster to open flaming fires while photoelectric detectors respond faster to smoldering fires but both normally respond within seconds of each other. Smoke detectors are fairly inexpensive and can be purchased at any local hardware or variety store.

The Utah State Fire Marshal's office recommends that smoke detectors be installed near any bedroom or sleeping area, normally in the hallway leading to the bedrooms, and on every level of the home. Once the detectors have been installed they must be maintained on a regular basis. The importance of maintaining your smoke detectors cannot be emphasized too strongly. Testing a smoke detector is relatively easy. If you are not able to reach the detector, then a broom handle can be used to push the button on the detector until the alarm sounds. This should be done no less than once a month. Batteries must be replaced regularly as well. Changing the battery in your smoke detector is a change that could save your life. A good way to remember when to change your detector battery that has become popular is to change it either in the spring or the fall when we change our clocks to/from daylight savings time.

The question of smoke detectors versus heat detectors often comes up. Heat detectors are another type of detection device that can be installed in the home. However, according to Section 16, Chapter 4 of the National Fire Protection Association (NFPA) Fire Protection Handbook, "heat detectors are best suited for detection in a small confined space where rapidly building high heat output fires are expected." Section 16, Chapter 3 of the NFPA Fire Protection Handbook states that "Actual fire tests in residential occupancies have shown that measurable amounts of smoke have preceded measurable amounts of heat in almost all cases...and...although heat detectors for residential use have been available since 1921, field tests have shown that they are not as effective as smoke detectors in detecting fires in the home." It is worth noting that most residential fires are of the slow, smoldering type and not the rapidly high heat building type.

Another important aspect of home fire safety is to create a fire escape plan. The plan should include the entire family. Map out two (2) escape routes from every room. Make sure that windows can be quickly opened in the event you must exit a fire. Designate a place outside the home where family members can meet after escaping from a fire. In a fire, crawl low on the floor, under the smoke, with your mouth and nose covered with a cloth or towel until you can exit. Go to your designated meeting place and stay out; **DO NOT go back inside**. Hold family fire drills and practice how to exit in case of a fire. The combination of installing and maintaining smoke detectors in your home, having a fire escape plan for your family and practicing that plan by holding family fire drills is a winning combination which may prove to be life saving!

